Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEVEN C. DEANE and CORNELIS VAN BERKEL

Appeal No. 2001-1723
Application No. 09/112,263

ON BRIEF

Before PAK, SMITH JEFFREY T., and MOORE, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 through 5 and 10. Claims 6 through 9, the remaining claims in the application, have been objected to, but have been indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

APPEALED SUBJECT MATTER

Claims 1 and 10 are representative of the subject matter on appeal and read as follows:

1. A substrate for carrying on an insulating surface thereof thin film circuit elements in a large area electronic device, wherein the substrate comprises a thin sheet bonded to a layer of rigid, cellular material.

10. A large area electronic device comprising a substrate on which thin film circuit elements are carried, wherein the substrate comprises a substrate according to Claim 1, the thin film circuit elements are carried on the surface of the thin glass sheet.

PRIOR ART

In support of his rejections, the examiner relies on the following prior art references:

Schnable et al. (Schnable)[1]	4,196,232	Apr. 1, 1980
Hotaling (Hotaling '364)	5,221,364	Jun. 22, 1993
Hotaling (Hotaling '776)	5,358,776	Oct. 25, 1994

Webster's II New Riverside University Dictionary[2], The Riverside Publishing Company, page 533, (1994).

Appellants rely on the following reference:

Hackh's Chemical Dictionary[3], Fourth Edition, McGraw-Hill Book Company, pp 298-299 (unknown publication date).

REJECTION

[1] The examiner relies on this patent for the purposes of interpreting the term "glass" in the claims on appeal.

[2] The examiner relies on this dictionary for the purposes of interpreting the term "glass" in the claims on appeal.

[3] The appellants rely on this dictionary for the purposes of interpreting the term "glass" in the claims on appeal.

The appealed claims stand rejected as follows:

1) Claims 1 through 3, 5 and 10 under 35 U.S.C. § 102(b) as anticipated by the disclosure of Hotaling '364;

2) Claims 1 through 3 and 5 under 35 U.S.C. § 102(b) as anticipated by the disclosure of Hotaling '776; and

3) Claim 4 under 35 U.S.C. § 103 as unpatentable over the disclosure of either Hotaling '364 or '776.

OPINION

We have carefully reviewed the claims, specification and prior art, including all of the evidence and arguments advanced by both the examiner and appellants in support of their respective positions. This review leads us to conclude that the examiner's §§ 102(b) and 103 rejections are well founded. Accordingly, we will sustain the examiner's §§ 102(b) and 103 rejections for essentially those reasons expressed in the Answer and below.

We find that Hotaling '364 and '776 describe an aerogel substrate planarized with SiO_2 using plasma enhanced chemical vapor deposition. See Hotaling '364, column 3, lines 45-48 and column 5, lines 45-66, and Hotaling '776, column 4, lines 50-53 and column 6, lines 15-46. The examiner determines that the aerogel substrate corresponds to the claimed layer of rigid, cellular material and that the planarizing SiO_2 layer corresponds to the claimed thin glass sheet. See, e.g., the Answer, pages 3-4.

The appellants argue that the SiO_2 layer described in Hotaling '364 and '776 is not a "glass" layer as required by the claims on appeal. We are not persuaded by this argument for the reasons well articulated by the examiner in his Answer and Supplemental Answer. We add the following for emphasis.

As our reviewing court in *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1321-22 (Fed. Cir. 1989) stated that during prosecution or examination of a patent application, the claims therein

> are interpreted as broadly as their terms reasonably allow. When the applicant state the meaning that the claim terms are intended to have, the claims are examined with that meaning, in order to achieve a complete exploration of the applicant's invention and its relation to the prior art.

The purpose of giving the broadest reasonable interpretation, absent the definition in the specification to the contrary, is to allow the appellants to amend[4] their claims to obtain the proper coverage by express claim language, "the thought being to reduce the possibility that, after the patent is granted, the claims may be interpreted as giving broader coverage than is justified." *In re Prater*, 415 F.2d 1393, 1404, 162 USPQ 541, 550 (1969).

Here, as indicated by the examiner in his Answer and Supplemental Answer, the specification does not define the meaning of "glass" to exclude the planarizing "SiO_2" layer described in the Hotaling references. Also, we observe that the appellants do not dispute that both Schnable and *Webster's II New Riverside Dictionary* referred to by the examiner define "glass" as

[4] Prosecution, unlike litigation, allows appellants to amend claims.

including "SiO_2". See also Schnable, column 1, lines 15-22 and *Webster's II New Riverside Dictionary*, page 533. Further, we observe that *Hackh's Chemical Dictionary* relies upon by the appellants provides a broad definition of "glass" followed by specific examples of glass compositions. As indicated by the examiner in his Supplemental Answer, the broad definition therein includes the "SiO_2" layer described in the Hotaling references. Even if "glass" defined in *Hackh's Chemical Dictionary* is limited to specific non-SiO_2 glass compositions, we determine that the broadest reasonable definition provided in either Schnable or *Webster's II New Riverside Dictionary* is controlling. As pointed out by *In re Morris*, 127 F.3d 1048, 1051, 44 USPQ2d 1753, 1759 (Fed. Cir. 1997):

> Absent an express definition in their specification, the fact that appellants can point to definitions or usages that conform to their interpretation does not make the [examiner's] definition unreasonable when the [examiner] can point to other sources that support their interpretation.

The appellants also argue that the functional limitation recited in the preamble of claim 1 further distinguishes the claimed substrate over the prior art substrate. We are not persuaded by this argument.

As the court stated in *In re Swinehart*, 439 F.2d 210, 213, 169 USPQ 226, 229 (CCPA 1971):

> Where the [examiner] has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, [he or she] possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

Here, we find that the claimed and prior art substrates appear to be identical or substantially identical. Thus, we determine that the examiner has reason to believe that the claimed functional limitation is an inherent characteristic of the prior art substrate. *See In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1432 (Fed. Cir. 1997). The appellants, however, do no provide any evidence to show that the prior art substrate does not possess the claimed functional limitation. See the Brief in its entirety. Nor do we find any evidence in the record showing that the claimed functional limitation renders the structure and/or composition of the claimed substrate patentably different from those of the prior art substrate. Thus, on this record, we determine that the claimed functional limitation does not distinguish the claimed substrate from the prior art substrate. *Schreiber*, 128 F.3d at 1477, 44 USPQ2d at 1432.

> In any event, as properly found by the examiner at page 5 of the Supplemental Answer,
>
> Hotaling '364 is directed to lightweight solar cells that may have various types of electrodes or contact mounted in contact with the thin glass sheet (column 5, lines 67 - column 6, line 14). This reads on a large area electronic device having thin film circuit elements.

We also observe that the appellants have not specifically challenged this finding. Thus, we conclude that Hotaling '364 not only describes the claimed functional limitation recited in claim 1,

but also describes the corresponding limitation recited in use claim 10, within the meaning of 35 U.S.C. § 102(b).

With respect to claim 4, the appellants argue that neither Hotaling '364 nor Hotaling '776 teaches or would have suggested a glass sheet having a thickness of about 0.1 mm. We do not agree.

Although the Hotaling references do not mention the thickness of their planarizing SiO_2 layer, it can be inferred from the teachings therein that the thickness of the planarizing SiO_2 layer must serve both the planarizing and weight reducing purposes (essentially the same purposes as the appellants'). In other words, we determine that one of ordinary skill in the art would have recognized that the thickness of the planarizing SiO_2 layer described in the Hotaling references is no more than a result effective variable. Thus, we conclude that mere optimization of the thickness of the planarizing SiO2 layer described in the Hotaling references to obtain the desired thickness is well within the level of one of ordinary skill in the art. *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980).

As stated by our reviewing court in *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990):

> The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims .... These cases have consistently held that in such a situation, the applicant must show that the particular range is *critical*, generally by showing that the claimed range achieves unexpected results relative to the prior art range. [Citations omitted].

On this record, however, the appellants have not demonstrated, much less argued, that the claimed thickness imparts unexpected results.

Under these circumstances, we concur with the examiner that the employment of the optimum thickness, such as the claimed thickness, of the planarizing SiO_2 layer in the substrate of the type described in the Hotaling references would have been obvious to one of ordinary skill in the art within the meaning of 35 U.S.C. § 103.

In view of the forgoing, the decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

CHUNG K. PAK Administrative Patent Judge	)
JEFFREY T. SMITH Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
JAMES T. MOORE Administrative Patent Judge	)

CKP/lp

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